Kingdom of Saudi Arabia Experience in the National and International Arrangements for the International Transport of Nuclear and Radioactive Materials and Its Contribution to the International Nuclear Security Regime

Paper Abstract:

The Kingdom of Saudi Arabia (KSA) affirms its commitment to strengthening the national and international nuclear security regime. The KSA is party in the Convention of Physical Protection of Nuclear Material and its Amendment (A/CPPNM) since 2009 and 2011, respectively, and party in the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management since 2011. In addition, the KSA has submitted its political commitment to the Code of Conduct on the Safety and Security of Radioactive Sources (CoC) and its Supplementary Guidance in 2019, acknowledging the threats associated with national and international transportation of Nuclear and Other Radioactive Material.

Accordingly, the KSA has established the national legal framework, shown in Fig.1, that is based on National Policies and National Laws including the law of Nuclear and Radiological Control (law). The law mandates the Nuclear and Radiological Regulatory Commission (NRRC) to develop technical regulations related to Nuclear Security. Moreover, the KSA has adopted in its national legal framework the mechanisms that fulfil the obligations within the international instruments by developing Joint Government Organizations Protocols (JGoPs), a legally binding mechanism for ensuring roles and responsibilities, and coordination between the NRRC and other relevant government authorities, enacted by the Cabinet of Ministers. JGoPs between the NRRC and other national authorities responsible for Civil Aviation and Sea Ports describe the roles and responsibilities of each government authority to assure achieving highest degree of Nuclear Security commitments with international legal instruments. NRRC has developed State Variation that illustrates the national requirements for the import, export and transit of Nuclear and Other Radioactive Material to, or from, or through the Kingdom's airspace or waterways.

Nevertheless, the KSA has developed a comprehensive national procedure to digitally process requests for the authorization of the international transport of Nuclear and other Radioactive Materials, before their departure from the state of origin. Such a procedure complies with the international obligations specified in A/CPPNM, including arrangements for notification to states involved in the transportation. Accordingly, this has resulted in a reduction of possible denial or delay of shipment in the transiting and/or importing states since the arrangement of the shipment has been processed. In addition, this demonstrates the alignment of KSA's objectives with the International Atomic Energy Agency's (IAEA) objectives by reducing the chance of any occurrence of denial or delay of shipment. The IAEA has defined the denial of shipment (DoS) as

an explicit or implicit refusal to carry or accept a shipment of radioactive material though it conforms to all the applicable Regulations.

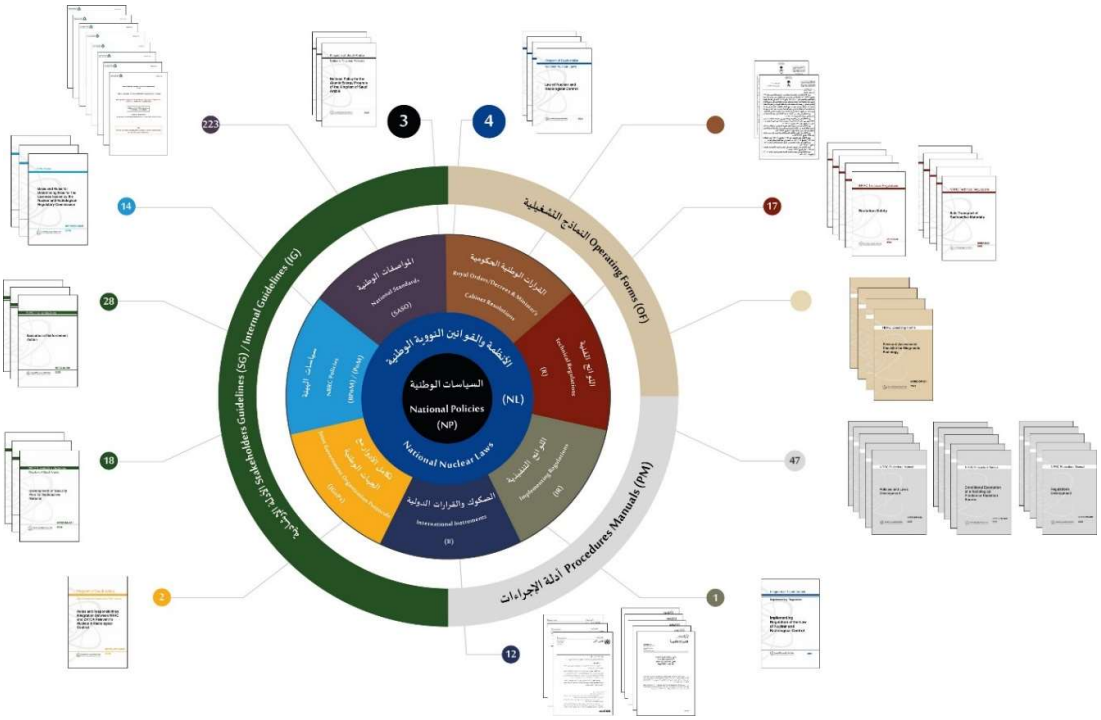

Figure 1. The National Legal Framework

Through this national procedure, 31% of requests were not authorized to pass through or into Kingdom's airspace/waterways as shown in Fig.2, due to various reasons including, but not limited to, incomplete shipping documents, mismatch of information among the shipping documents, and failure to provide assurance to apply physical protection measures in accordance with the A/CPPNM by states involved in the transportation and are not party to the convention nor its amendment.

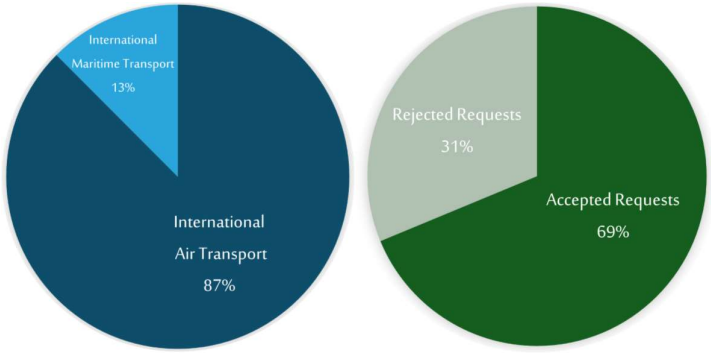

Fig2. Statistics related to the international transport of nuclear and radioactive materials through or into the Kingdom's airspace/waterways

This paper illustrates the national nuclear legal framework and the national procedure for the international transport of nuclear and radioactive material in compliance with the A/CPPNM and CoC while concerning the facilitation of safe and secure transport of nuclear and other radioactive materials, and presents the effectiveness of such procedure and associated results.